



## CONTENTS OF VOLUME 135

### Vol. 135A No. 1

#### Symposium papers

- C.J. Kirk, L. Bottomley, N. Minican, H. Carpenter, S. Shaw, N. Kohli, M. Winter, E.W. Taylor, R.H. Waring, F. Michelangeli and R.M. Harris 1 Environmental endocrine disrupters dysregulate estrogen metabolism and  $\text{Ca}^{2+}$  homeostasis in fish and mammals via receptor-independent mechanisms
- F.B. Jensen 9 Nitrite disrupts multiple physiological functions in aquatic animals
- R.D. Handy 25 Chronic effects of copper exposure versus endocrine toxicity: two sides of the same toxicological process?

#### Reviews

- E.M. Scarpelli 39 Physiology of the alveolar surface network
- S.J. Crookford 105 Thyroid rhythm phenotypes and hominid evolution: a new paradigm implicates pulsatile hormone secretion in speciation and adaptation changes
- T. Schwerte and R. Fritsche 131 Understanding cardiovascular physiology in zebrafish and *Xenopus* larvae: the use of microtechniques

#### General papers

- M. García-Guerrero, H. Villarreal and I.S. Racotta 147 Effect of temperature on lipids, proteins, and carbohydrates levels during development from egg extrusion to juvenile stage of *Cherax quadricarinatus* (Decapoda: Parastacidae)
- T.A. Leedom, T. Hirano and E.G. Grau 155 Effect of blood withdrawal and angiotensin II on prolactin release in the tilapia, *Oreochromis mossambicus*
- K.M. Gilmour and G.K. MacNeill 165 Apparent diffusion limitations on branchial  $\text{CO}_2$  transfer are revealed by severe experimental anaemia in brown bullhead (*Ameiurus nebulosus*)
- H. He, M.B. Farnell and M.H. Kogut 177 Inflammatory agonist stimulation and signal pathway of oxidative burst in neonatal chicken heterophils
- R.A. Phillips, J.A. Green, B. Phalan, J.P. Croxall and P.J. Butler 185 Chick metabolic rate and growth in three species of albatross: a comparative study
- I Instructions to Authors

### Vol. 135A, No. 2

#### Review

- Č. Lucu and D.W. Towle 195  $\text{Na}^+$ + $\text{K}^+$ -ATPase in gills of aquatic Crustacea

#### General papers

- P. Doughty, R. Shine and M.S.Y. Lee 215 Energetic costs of tail loss in a montane scincid lizard
- M.M. Rahman, A. Vandingenen, M. Begum, M. Breuer, A. De Loof and R. Huybrechts 221 Search for phase specific genes in the brain of desert locust, *Schistocerca gregaria* (Orthoptera: Acrididae) by differential display polymerase chain reaction
- B.K. McNab 229 The energetics of New Zealand's ducks
- M.C.J. Quinn, P.A. Veillette and G. Young 249 Pseudobranch and gill  $\text{Na}^+$ ,  $\text{K}^+$ -ATPase activity in juvenile chinook salmon, *Oncorhynchus tshawytscha*: developmental changes and effects of growth hormone, corti sol and seawater transfer

Contents of volume

X. Zhou, M. Xie, C. Niu and R. Sun	263	The effects of dietary vitamin C on growth, liver vitamin C and serum cortisol in stressed and unstressed juvenile soft-shelled turtles ( <i>Pelodiscus sinensis</i> )
M. Rousseau, E. Plouguerné, G. Wan, R. Wan, E. Lopez and M. Fouchereau-Peron	271	Biom mineralisation markers during a phase of active growth in <i>Pinctada margaritifera</i>
N. Kälén, R.D. Martin and M. Genoud	279	Basal rate of metabolism and temperature regulation in Goeldi's monkey ( <i>Callimico goeldii</i> )
S.E. Lankford, T.E. Adams and J.J. Cech, Jr.	291	Time of day and water temperature modify the physiological stress response in green sturgeon, <i>Acipenser medirostris</i>
G.V. Köllisch, P.D. Verhaert and K.H. Hoffmann	303	<i>Vanessa cardui</i> adipokinetic hormone (Vanca-AKH) in butterflies and a moth
R.G. Morris, J.W. Beeman, S.P. VanderKooi and A.G. Maule	309	Lateral line pore diameters correlate with the development of gas bubble trauma signs in several Columbia River fishes
C. Bosque and R. Calchi	321	Food choice by Blue-gray Tanagers in relation to protein content
C.-H. Huang, M.-F. Liang and Y.-C. Kam	329	The fatty acid composition of oophagous tadpoles ( <i>Chirixalus eiffingeri</i> ) fed conspecific or chicken egg yolk
A.J. Grant, D.A. Trautman, S. Frankland and R. Hinde	337	A symbiosome membrane is not required for the actions of two host signalling compounds regulating photosynthesis in symbiotic algae isolated from cnidarians
H. Guderley, D. Lapointe, M. Bédard and J.-D. Dutil	347	Metabolic priorities during starvation: enzyme sparing in liver and white muscle of Atlantic cod, <i>Gadus morhua</i> L.
	I	Instructions to Authors

Vol. 135A, No. 3

General papers

B.K. McNab	357	Standard energetics of phyllostomid bats: the inadequacies of phylogenetic-contrast analyses
J.L. Wilkens and H.H. Taylor	369	The control of vascular resistance in the southern rock lobster, <i>Jasus edwardsii</i> (Decapoda: Palinuridae)
S. Iglesias, M.B. Thompson and F. Seebacher	377	Energetic cost of a meal in a frequent feeding lizard
I.Y. Popova, Y.M. Kokoz, K.I. Zenchenko and O.S. Vinogradova	383	The paradoxically high reactivity of septal neurons in hibernating ground squirrels to endogenous neuropeptides is lost after chronic deafferentation of the septum from the preoptichypothalamic areas
T. Tachibana, T. Takagi, E.-S. Saito, S. Tomonaga, R. Zhang, Y. Koga, Y. Kido, D.M. Denbow and M. Furuse	403	Beta 3-adrenergic receptor is involved in feeding regulation in chicks
Th. Schaarschmidt and K. Jürss	411	Locomotory capacity of Baltic Sea and freshwater populations of the threespine stickleback ( <i>Gasterosteus aculeatus</i> )
J.B. Andersen, D.V. Andrade and T. Wang	425	Effects of inhibition gastric acid secretion on arterial acid-base status during digestion in the toad <i>Bufo marinus</i>
R. Kamata and H. Washio	435	Neuromuscular transmission of pectoral fin muscles of the goldfish <i>Carassius auratus</i>
L. Debray, I. Le Huerou-Luron, T. Gidenne and L. Fortun-Lamothe	443	Digestive tract development in rabbit according to the dietary energetic source: correlation between whole tract digestion, pancreatic and intestinal enzymatic activities
K.L. Montooth and A.G. Gibbs	457	Cuticular pheromones and water balance in the house fly, <i>Musca domestica</i>
A. Mandal, T. Verri, P.K. Mandal, C. Storelli and G.A. Ahearn	467	Expression of Na <sup>+</sup> /D-glucose cotransport in <i>Xenopus laevis</i> oocytes by injection of poly(A) <sup>+</sup> RNA isolated from lobster ( <i>Homarus americanus</i> ) hepatopancreas
P.J. Ponganis, R.P. Van Dam, D.H. Levenson, T. Knower, K.V. Ponganis and G. Marshall	477	Regional heterothermy and conservation of core temperature in emperor penguins diving under sea ice

Y.M. Lin, C.N. Chen and T.H. Lee	489	The expression of gill Na, K-ATPase in milkfish, <i>Chanos chanos</i> , acclimated to seawater, brackish water and fresh water
	I	Instructions to Authors
		<i>Vol. 135A, No. 4</i>
<i>Symposium papers</i>		
H.S. Leong, R.W. Brownsey, J.E. Kulpa and M.F. Allard	499	Glycolysis and pyruvate oxidation in cardiac hypertrophy—Why so unbalanced?
D.J. McKenzie, A. Shingles and E.W. Taylor	515	Sub-lethal plasma ammonia accumulation and the exercise performance of salmonids
S.J. Brooks and C.L. Mills	527	The effect of copper on osmoregulation in the freshwater amphipod <i>Gammarus pulex</i>
<i>General papers</i>		
M.M. Anwar and A.-R.M.A. Meki	539	Oxidative stress in streptozotocin-induced diabetic rats: effects of garlic oil and melatonin
T. Urashima, T. Nakamura, K. Yamaguchi, J. Munakata, I. Arai, T. Saito, C. Lydersen and K.M. Kovacs	549	Chemical characterization of the oligosaccharides in milk of high Arctic harbour seal ( <i>Phoca vitulina vitulina</i> )
S.K. Maloney, J.M. Bonomelli and J. DeSouza	565	Scrotal heating stimulates panting and reduces body temperature similarly in febrile and non-febrile rams ( <i>Ovis aries</i> )
J.C. Sánchez and R.J. Wilkins	575	Effects of hypotonic shock on intracellular pH in bovine articular chondrocytes
M.L. Wright, C.J. Guertin, J.L. Duffy, M.C. Szatkowski, R.F. Visconti and C.D. Alves	585	Developmental and diel profiles of plasma corticosteroids in the bullfrog, <i>Rana catesbeiana</i>
D.C. Jackson and S.F. Denniston	597	Effects of experimental anemia on blood ion and acid-base status of turtles during submergence in aerated water at 3 °C
R.A.L. Osorio, V.L.F. Silveira, S. Maldjian, A. Morales, J.S. Christofani, A.K. Russo, A.C. Silva and I.C. Piçarro	605	Swimming of pregnant rats at different water temperatures
Y.H. Chan, C.H.K. Cheng and K.M. Chan	613	Recombinant goldfish growth hormones (gfGH-I and -II) expressed in <i>Escherichia coli</i> have similar biological activities
H.M. Hull-Sanders, A.G. Appel and M.D. Eubanks	625	Comparative water relations of adult and juvenile tortoise beetles: differences among sympatric species
E.A. Koutsos, C.C. Calvert and K.C. Klasing	635	The effect of an acute phase response on tissue carotenoid levels of growing chickens ( <i>Gallus gallus domesticus</i> )
	I	Contents of Volume
	V	Subject Index
	IX	Author Index
	XI	Instructions to Authors



